Women With Epilepsy Are More Likely to Have Suffered Abuse and Are Less Likely to Receive Treatment for Depression: How Does This Affect Their Pregnancies?

Depression and Anxiety in Women With Epilepsy During Pregnancy and After Delivery: A Prospective Population-Based Cohort Study on Frequency, Risk Factors, Medication, and Prognosis

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OBJECTIVE: To assess incidence, prevalence, risk factors, and prognosis of peripartum depression and anxiety in a prospective study of women with epilepsy. METHOD: Pregnancies in women with epilepsy (n = 706) were compared to pregnancies in all women without epilepsy (n = 106 511) including women with specified nonepileptic chronic diseases (n = 8,372) in the Norwegian Mother and Child Cohort Study. The database was linked to the Medical Birth Registry of Norway. Depression and anxiety were assessed with validated questionnaires five times from the second trimester to 36 months after delivery. Blood was drawn for analysis of antiepileptic drug (AED) concentrations. RESULTS: Women with epilepsy more often had peripartum depression (26.7%) or anxiety (22.4%) than women without epilepsy (18.9% and 14.8%, respectively, $p < 0.001$ for both comparisons) and women with other chronic diseases (23.1% and 18.4%, respectively, $p = 0.03$ and 0.01). Women using AEDs during pregnancy were especially at risk regardless of AED type. The risk further increased with the use of multiple AEDs and with high doses and/or plasma levels. Risk factors associated with peripartum depression and/or anxiety in the epilepsy cohort were high seizure frequency, a history of physical and/or sexual abuse, adverse socioeconomic factors, previous loss of a child, AED use, unplanned pregnancy, and prepregnancy depression and/or anxiety. The recovery rate 3 years after delivery was lower for women with epilepsy with a history of depression/anxiety or physical/sexual abuse than for women without epilepsy. Depressed women with epilepsy were less frequently treated with antidepressive drugs during pregnancy than women without epilepsy. SIGNIFICANCE: Women with epilepsy frequently have depression and anxiety during and after pregnancy. Patients at risk should be identified before delivery as depressive symptoms could be undertreated in this group.

Commentary

This article, using data obtained from the Medical Birth Registry of Norway, compared the rates of onset of depression and anxiety during and after pregnancy in a group of women with epilepsy (n=706) and a group of pregnant women without epilepsy (n=106,511). Pregnant women with chronic disease were also a comparator group, but they were a subset of women without epilepsy. Rates of receiving antidepressive treatment were also compared. The investigators found that women with epilepsy had rates of peripartum depression or anxiety nearly 50% higher than that of women without epilepsy and 20% higher than women with other chronic diseases. Risk factors for depression included those associated with more severe epilepsy, such as high antiepileptic drug (AED) doses or levels, frequent seizures, and use of multiple AEDs. Other factors were adverse socioeconomic factors, including lower educational level, low household income, and single parenthood; previous loss of a child; unplanned pregnancy; and prepregnancy depression and/or anxiety. In the investigators' backward stepwise multiple logistic regression analysis, the variables that remained were "AED use during pregnancy (OR [odds ratio] 1.6, CI [confidence interval]1.1–2.3), sexual and/or physical abuse (OR 2.2, CI 1.4–3.3), previous psychiatric history (OR 3.9, CI 2.7–5.7), and adverse socioeconomic factors (OR 1.9, CI 1.2–3.0)."

That the identified epilepsy-associated factors affect depression and anxiety rates is not unexpected, as the investigators point out in their discussion. Even the disadvantaged socioeconomic factors are not unexpected risk factors for depression and anxiety during pregnancy; decline in income levels and cohabitation status are associated with increased rates of onset of major depression (1).

What was unexpected, however, was the high rate of physical and/or sexual abuse in women with epilepsy. As the investigators point out, a history of abuse is often discussed in association with psychogenic nonepileptic seizures rather than with epilepsy. Notably, the rate of abuse was higher in women

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with epilepsy not taking AEDs versus those taking AEDs, which raises the question of whether some of the women with epilepsy who are not taking AEDs may have actually had psychogenic nonepileptic seizures. This possibility was not excluded by the methodology; self-selection bias could have been present. The response rate to the initial questionnaire to enter the study was 40%, and the response to a subset of this group contacted again to validate their AED use and seizure history was 50%. By way of further validation, a sample of 40 subjects underwent direct review of their hospital records; comparison with this information and the self-report data was "excellent," according to the investigators.

Thus, the disturbing and underrecognized possibility exists that women with epilepsy suffer high rates of physical and sexual abuse. The issue is complex, however, in that the adverse socioeconomic factors that persons with epilepsy often face puts them at increased risk for abuse. The clearest statement on a politically prickly topic is perhaps from the American Psychiatric Association, which states on its website that "that exposure to violence affects all socioeconomic levels but lower socioeconomic individuals and families have increased rates of exposure" (2). The association between medical disability and an increased risk of abuse is clear, however, as put forth in two systematic reviews with meta-analyses in the *Lancet* in 2012; the first focused on children and the second on adults. For children with disabilities, the odds ratio of physical and sexual abuse compared with that of children without disabilities was significant at 3-4, with marked heterogeneity (3). For adults with disabilities, the odds ratio for physical and sexual abuse compared with that of adults without disabilities was significant at 1.5 for all disabilities, including intellectual disabilities (4). It is somewhat unclear if epilepsy is specifically included in the disabilities captured in these studies, but it is certainly plausible that epilepsy could contribute to a disability imparting risk.

The issue of the lack of antidepressant treatment for women with epilepsy is also complex and may not be simply a problem of underrecognition. In an attempt to understand the undertreatment of persons with epilepsy, the reactions of consecutive epilepsy patients upon being advised to undergo further evaluation and possible treatment for depressive symptoms uncovered during a routine office visit was prospectively assessed in one study reported as an American Epilepsy Society abstract (5). All patients who had at least moderate depression according to the Quick Inventory of Depressive Symptomatology-Self-Report were offered referral or had therapists. Of 113 patients seen over 2 weeks, 17 were already under the care of a mental health professional, and an additional 29 patients were referred for further treatment for possible depression. Of these 29 patients, 17 (56%) refused to accept information about mental health referral. The most frequently stated reasons for declining referral were that patients thought they did not need treatment for depression or thought their current mood problems were related to an acute, temporary situation. Patients who scored in the severe and very severe range who refused therapy stated that it had not been helpful in the past. The investigators/health care providers concluded that the patients with epilepsy seemed reluctant to acknowledge the possibility of being depressed and appeared to reject both the burden of additional diagnoses and the possibility of further medication treatment.

Overall, the article by Bjørk et al. makes one wonder who these pregnant women with epilepsy really are. They appear to live with greater socioeconomic adversity and risk than other women, including those with other chronic illnesses. Also, they are in general undertreated for the depression and anxiety that is surely present. This could be due, at least in part, to a kind of stoicism among them and cannot be blamed completely on the health care providers. One important finding is the high rate of reported physical and sexual abuse in the epilepsy cohort. This finding should not be overshadowed by our seeming fascination with the psychodynamic avenues leading from abuse to conversion or dissociative disorders. Further, this finding should be confirmed and the simple pathway of a vulnerable population being subjected to abuse and needing protection from criminal acts should be brought to light.

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